

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

(Attorney Docket No. 16106US02)

In the Application of:

Frederic Hayem, et al.

Serial No. 10/733,856

Filed: December 11, 2003

For: SYNCHRONIZATION OF
MULTIPLE PROCESSORS IN A
MULTI-MODE WIRELESS
COMMUNICATION DEVICE

Examiner: Fred A. Casca

Group Art Unit: 2617

Confirmation No. 8105

Electronically Filed on April 8, 2009

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

The Applicant requests review of the final rejection in the above-identified application, stated in the final Office Action mailed on December 11, 2008 (hereinafter, the Final Office Action) with a period of reply through April 11, 2009, pursuant to the attached petition for one month extension. The Applicant also requests review of the arguments stated in pages 2-3 of the Advisory Office Action mailed on March 30, 2009 (hereinafter, the Advisory Office Action). No amendments are being filed with this request. This request is being filed with a Notice of Appeal. The review is being requested for the reasons stated on the attached sheets.

REMARKS/ARGUMENTS

Claims 1-43 are pending in the instant application. Claims 1, 9, 15, 20, 28, 34 and 38 are independent. Claims 6, 7, 13, 16, 25, 26, 32, 36, 41, and 42 are rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the enablement requirement. Claims 1-5, 8-12, 14-18, 20-24, and 27 are rejected under 35 U.S.C. § 103(a) as being unpatentable over USPP 2002/0141441 ("Neumann"), in view of USP 5,918,040 ("Jarvis"). Claims 6, 13, 19, and 25 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Neumann, in view of Jarvis, and further in view of well known prior art MPEP 2144.03. Claims 7 and 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Neumann, in view of Jarvis, well known prior art MPEP 2144.03, and further in view of USPP 2002/0186754 ("Kawai"). Claims 28-43 are rejected for the same rationale as used for claims 1-27. The Applicant respectfully traverses these rejections at least based on the following remarks.

Examiner's Response to Arguments in the Final Office Action and the Advisory Office Action

I. Rejection to claims 6, 7, 13, 16, 25, 26, 32, 36, 41, and 42 under 35 U.S.C. § 112, first paragraph

The Examiner, at page 2 of the Advisory Office Action, argues that the claim limitations in Applicant's claims 6, 7, 13, 16, 25, 26, 32, 36, 41, and 42 fail to comply with the enablement requirement under 35 U.S.C. § 112, first paragraph. Specifically, the Examiner requests further explanation of how the "additional timer value" pertains to the "second wireless communication protocol" in Applicant's Figs. 10-13. The Examiner is referred to the description of Applicant's Fig. 10:

"The WCDMA baseband co-processor 1004 further includes a master timer 1018 configured to maintain counter values utilized by the WCDMA modem 1016. The WCDMA baseband co-processor 1004 operates to perform physical layer processing of WCDMA bearer signals, and interfaces with the host baseband processor 1001 through a baseband interface 1022." (see Specification at page 18, lines 10-16)

Applicant's Fig. 10 discloses that the WCDMA baseband co-processor 1004 has a WCDMA master timer 1018 which maintains counter values (i.e., timer values) to be utilized by the WCDMA modem 1016. Since the physical layer processing functions of WCDMA bearer signals (i.e., of the second wireless communication protocol) are carried out by the WCDMA baseband co-processor 1004, therefore, the counter values (i.e., timer values) of the WCDMA master timer 1018 are pertinent to the second wireless communication protocol. The Examiner is also referred to the description in Applicant's Fig. 11, which states:

"Turning now to FIG. 11, ...a counter 1100 maintained by the WCDMA master timer 1018 of the WCDMA baseband coprocessor 1004. The counter 1100 includes two fields; namely, a sample counter 1104 and slot counter 1108. In the exemplary embodiment both of the counters 1104 and 1108 are free-running at every rising

edge of the 15.36 MHz system clock (not shown) of the WCDMA baseband co-processor 1004" (see Specification at page 19, lines 24-29)

Likewise, Applicant's Fig. 11 clearly discloses that **the counter 1100** maintained by the WCDMA master timer is **a two field counter**, including **"a sample counter 1104 and slot counter 1108"**. In other words, **there are two different counter values (i.e., timer values) that pertain to the second wireless protocol communication**. Since the sample counter 1104 and the slot counter 1108 are both clocked or timed to the rising edge of the system clock of the WCDMA baseband co-processor 1004, consequently, the counter values of the sample counter 1104 and the slot counter 1108 are the timer values, and both pertain to the WCDMA protocol (i.e., the second wireless communication protocol). In this regard, **"additional timer value"** pertains to the **"second wireless communication protocol,"** as recited in Applicant's claim 6, is supported by Applicant's Figs. 10-11 and in the related description.

Furthermore, Applicant's claim 7 clearly recites "said at least one timer value corresponds to a slot counter and said additional timer value corresponds to a sample counter," which are supported by Applicant's Figs. 10-11. In this regard, claim 7 clarifies that both the "one timer value" and the "additional timer value" as recited in claim 6. In addition, the Applicant's Figs. 12-13 further substantiate that the timing values of the sample_cnt 1104 (i.e., the additional timer value) and the slot_cnt 1108 (i.e., the one timer value) are both clocked at the rising edges of the WCDMA system clock (15.36 MHz) in the second wireless protocol communication.

Based on the above explanation, the Applicant maintains that claims 6, 7, 13, 16, 25, 26, 32, 36, 41, and 42 are fully supported by Applicant's Figs. 10-13 and the related description, and respectfully request that the rejection under 35 U.S.C. § 112, first paragraph be withdrawn.

II. Arguments to Claims 1 and 15

In page 2 of the Advisory Action, the Examiner maintained the rejection to claim 1, and disputed the relevancy of Applicant's arguments that Jarvis' both processors are situated in the same device, i.e., the linecard 12 or 14, a feature that the Examiner did not cite to reject Applicant's claim 1.

The Applicant respectfully disagrees that Applicant's arguments as such are not relevant. For example, the Applicant argued that both processors, namely, the interface 30 (with timer 31) and the packet processor 32 (with timer 33) reside within the same device, i.e., linecard 12 or 14. In other words, regardless of which processor, the interface 30, or the packet processor 32, that performs the alleged "enabling of timing synchronization", both processors still process the time stamped packets within the same linecard 12 or 14 and within the same network system 13 or 15. In this regard, Jarvis' alleged enabling timing synchronization does not take place between two different network systems. Therefore, Jarvis does not disclose or suggest "said host baseband processor enables timing synchronization **between said first and second wireless communication systems** on the basis of timing information transferred to said host baseband processor from said baseband co-processor" as recited in Applicant's claim 1. In addition to the above arguments, the Examiner is also wrong in

equating both the optical network 13, and the Ethernet network 15 to "a wireless communication system".

Moreover, even assuming for the sake of argument, that Jarvis discloses that the alleged "enabling timing synchronization" takes place between two wireless communication systems (which Jarvis does not), the Examiner's argument is still deficient. Jarvis clearly discloses an arbitrary timer value adjustment based on the comparison result. In other words, the alleged "enabling of timing synchronization" between the two timers (i.e., between the two processors) can take place in both directions. For example, both the master timer and the slave timer could increment its timer value (see Jarvis at the abstract and col. 4, lines 1-44). This further refutes the Examiner's argument that Jarvis discloses or suggest **"said host baseband processor enables timing synchronization between said first and second wireless communication systems on the basis of timing information transferred to said host baseband processor from said baseband co-processor"** as recited in Applicant's claim 1. Neumann does not overcome Jarvis' above deficiencies, and the Applicant maintains that claim 1 is allowable.

In page 2 of the Advisory Action, the Examiner maintained the rejection to claim 15, and seemed to argue that Jarvis does not need to disclose "generating a timer capture interrupt during a predetermined timing phase". The Examiner merely based his rationale that during a timing synchronizing process, different timing values need to be received and captured to perform comparison and adjustment. The Applicant did not argue that Jarvis does not disclose receiving or capturing of different timing values, the Applicant argued that **"generating a timer capture interrupt"** is not disclosed (see 3/11/09 response in pages 25-26). For example, the direct access read operation disclosed in Applicant's Fig. 12 also reads (i.e., receives and captures) the timer values of the sample counter and slot counter. However, Applicant's Fig. 13 specifically discloses generating an interrupt pulse 1310 by the host GSM processor using a GSM clk at a predetermined timing phase. **Jarvis clearly does not disclose such interrupt pulse generation, let alone a predetermined timing phase**, as alleged by the Examiner. In this regard, the Examiner's allegation that it is customary in the art for receiving and capturing timing values to have "generating a timer capture interrupt during a predetermined timing phase" is unsupported.

Furthermore, the Applicant also argued that Jarvis does not disclose "storing a timer value ...in response to the timer capture interrupt..." Moreover, the Applicant maintained that Jarvis' optical or Ethernet networks are not a "wireless communication network". Neumann does not overcome Jarvis' deficiencies, and the Applicant maintains that claim 15 is allowable. Therefore, the combination of Neumann and Jarvis does not establish a prima facie case of obviousness to reject Applicant's claim 1 and 15 under 35 U.S.C. § 103(a), and should be allowable. Likewise, independent claims 9 and 20 are similar in many respect to independent claim 1, are also submitted to be allowable.

III. Rejection of Independent Claims 1-5, 8-12, 14-18, 20-24 and 27 Under 35 U.S.C. 103(a)

A. Rejection of Independent Claims 1, 9 and 20

The Applicant maintains the arguments in the 3/11/09 response to Final Office Action. The Examiner is further referred to the above arguments by the Applicant in the Pre-Appeal Brief, that the combination of Neumann and Jarvis does not disclose or suggest "said host baseband processor enables timing synchronization between said first and second wireless communication system on the basis of timing information transferred to said host baseband processor from said baseband co-processor," as recited in claim 1. Likewise, independent claims 9 and 20 are similar in many respect to independent claim 1, are also submitted to be allowable.

B. Rejection of Independent Claim 15

The Applicant maintains the arguments in the 3/11/09 response to Final Office Action. The Examiner is further referred to the above arguments by the Applicant in the Pre-Appeal Brief, that the combination of Neumann and Jarvis does not disclose or suggest "generating a timer capture interrupt during a predetermined timing phase" and "storing a timer value ...in response to the timer capture interrupt..." as recited in claim 15.

The Applicant also maintains all the arguments relating to the dependent and remaining independent claims stated in pages 32-34 of the 3/11/09 response to Final Office Action.

CONCLUSION

Based on at least the foregoing, the Applicant believes that all claims 1-42 are in condition for allowance. If the Examiner disagrees, the Applicant respectfully requests a telephone interview, and requests that the Examiner telephone the undersigned Patent Agent at (312) 775-8093.

The Commissioner is hereby authorized to charge any additional fees or credit any overpayment to the deposit account of McAndrews, Held & Malloy, Ltd., Account No. 13-0017.

A Notice of Allowability is courteously solicited.

Date: April 8, 2009

Respectfully submitted,

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